

## Appendix E: Screening Measures

Table 1: Depression Screening Measures

| Depression Screening Measures   |   |  |                      |                        |   |                                  |                             |
|---|---|--|----------------------|------------------------|---|----------------------------------|-----------------------------|
| Tool  | Description   | # of Items/Format  | Ages                 | Time                   | Psychometric Properties   | Languages/Cultural Consideration | Cost                        |
| <b>BDI-II (Beck Depression Inventory)<sup>1,2</sup></b>                               | Measures symptoms of depression   | 21 items<br>Self-administered or verbally by trained administrator | 13+                  | 5 min                  | Sensitivity: 84%<br>Specificity: 81%<br>Coefficient alpha: .92          | English, Spanish                 | \$125/kit                   |
| <b>BDI-FS (Beck Depression Inventory-FastScreen for Medical Patients)<sup>3</sup></b> | Screens for depression, while omitting items that may be due to medical condition | 7 items  | 13+                  | <5 min                 | Sensitivity: 91%<br>Specificity: 91%<br>Cronbach's alpha: .84           | English                          | \$99/kit                    |
| <b>Beck Hopelessness Scale<sup>4-6</sup></b>  | Measures negative attitudes about the future                                      | 20 true/false  | 12 to 22             | 5-10 min               | Reliability: 0.93<br>Cronbach's alpha: 0.92 <sup>4</sup>                | English<br>Finnish<br>Spanish    | \$125/kit                   |
|   |   |  | 17 to 25 in Pakistan |                        | Cronbach's alpha: 0.81 <sup>5</sup>                                     | Urdu                             |                             |
| <b>BYI (Beck Youth Inventories)<sup>7,8</sup></b>                                     | Screens for depression, anxiety, anger, disruptive behavior, and self-concept     | 5 separate 20-item self-report inventories                         | 7 to 18              | 5 min/<br>inventory    | Cronbach's alpha: 0.83 to 0.94<br>Test-retest reliability: 0.61 to 0.87 | English                          | \$265/kit or \$55/inventory |
| <b>CDI-2 (Child Depression Inventory)<sup>9-12</sup></b>                              | Measures symptoms of depression   | Parent: 17 items<br>Teacher: 12 items<br>Youth: 28 items           | 7 to 17              | 5-10 min (youth items) | Cronbach's alpha: 0.71 to 0.89<br>test-retest range 0.74 to 0.83        | English, Spanish                 | \$289/kit                   |

|   |  |                        |                            |           |  |                              |                      |
|---|--|------------------------|----------------------------|-----------|--|------------------------------|----------------------|
| <b>CDI 2 Short</b> <sup>13</sup>  | Short version of CDI 2   | 10 items               | 7 to 17                    | 5 min     | Sensitivity: 93%<br>Specificity: 71%   | English<br>Spanish<br>German | \$55/short version   |
| <b>CDRS-R (Children's Depression Rating Scale- Revised)</b> <sup>14</sup>             | Semi structured interview for depression   | 17 items               | 6 to 17                    | 15-20 min | Cronbach's alpha:<br>Initial screening: 0.79<br>Baseline: 0.74<br>Exit: 0.92 | English                      | \$107/kit            |
| <b>CES-D (Center for Epidemiological Studies - Depression Scale)</b> <sup>15-20</sup> | Screens for depression, modified version for children and adolescents                | 20 items               | 6 to 17                    | 5-10 min  | Cronbach's alpha: 0.89   | English<br>Spanish           | Public domain        |
|   |  | 12 items short version | 7th, 9th, 10th, 12th grade |           | Cronbach's alpha: 0.85   |                              |                      |
| <b>Columbia Depression Scale</b> <sup>21</sup>  | Depression stem questions from the Diagnostic Interview Schedule for Children (DISC) | 22 yes/no items        | 11+                        | <5        | Cronbach's alpha: 0.87   | English                      | Free with permission |

|  |  |  |  |          |   |   |                      |
|--|--|--|--|----------|---|---|----------------------|
| <b>HADS (Hospital Anxiety and Depression Scale)</b> <sup>22-23</sup> | Brief assessment of anxiety and depression in medical populations.   | 14 items (7 anxiety, 7 depression)                     | 13+                                    | 2-5 min  | Cronbach's alpha: 0.71 (anxiety)<br>0.76 (depression)<br>Significant relationship between acceptance (Illness Cognition Questionnaire) and depressive symptoms  | English, Arabic, Dutch, French, German, Hebrew, Swedish, Italian, Spanish | Free                 |
| <b>KADS (Kutcher Adolescent Depression Scale)</b> <sup>24-25</sup>   | Measures symptoms of depression  | 6, 11, or 16 items                                     | 12 to 17                               | 5 min    | Sensitivity: 92%<br>Specificity: 71%  | English   | Free with permission |
| <b>MFQ (Mood and Feeling Questionnaire)</b> <sup>26-27</sup>         | Measures symptoms of depression, available as child self-report, parent report on child, and adult self-report | Youth: 33 items<br>Parent: 34 items<br>Adult: 33 items | 7+ research subjects & clinic patients | 5-10 min | MFQ-C<br>Cronbach's alpha: 0.95<br>Test-retest: .80; AUC: .85<br>Optimal cut point: 29<br>PPV: 21%<br>Sensitivity: 68%<br>Specificity: 88%<br><hr/> MFQ-P:<br>Cronbach's alpha: .96<br>Test-retest: .80;<br>Optimal cut point: 27<br>PPV: 23%<br>Sensitivity: 61%<br>Specificity: 85% | English<br>Norwegian  | Free                 |

|  |  |   |  |              |  |   |                             |
|--|--|---|--|--------------|--|---|-----------------------------|
| <p><b>MFQ - Short Version (SMFQ)<sup>28-30</sup></b></p> | <p>Measures symptoms of depression</p>                 | <p>Youth: 13 items<br/>Parent: 13 items<br/>Adult: 13 items</p> | <p>7+</p>  | <p>5 min</p> | <p>Child score AUC: 0.73<br/>Parent score AUC: 0.74<br/>Combined child + parent score: AUC =0.86<br/>At cut point of 10:<br/>Sensitivity: 76%<br/>Specificity: 78%</p>                     | <p>English</p>                          | <p>Free</p>                 |
| <p><b>PHQ-9<sup>31-34</sup></b></p>                      | <p>Measures symptoms of depression and suicidality</p> | <p>9 plus severity items</p>                                    | <p>Adolescent</p>  | <p>5 min</p> | <p>Cronbach's alpha: 0.79-.89<br/>Overall 88% sensitivity and 88% specificity</p>  | <p>English + over 30 more languages</p> | <p>Free with permission</p> |
|  |  |   | <p>Newly medically admitted in- and outpatients aged 13-16 in Pediatric Hospitals in Munich, Germany</p> |              | <p>Dimensional algorithm:<br/>Optimal cut point score of 8 or greater<br/>Cronbach's alpha: 0.82<br/>Sensitivity: 90%<br/>Specificity: 86.5%<br/>PPV: 48.6%; NPV: 98.4%<br/>AUC= 93.2%</p> | <p>German</p>                           |                             |
|  |  |   | <p>13 to 17</p>  |              | <p>Optimal cut point score of 11 or greater<br/>Sensitivity: 89.5%<br/>Specificity: 77.5%<br/>PPV: 15.2%; NPV: 99.4%<br/>AOC: 0.88</p>   | <p>English</p>                          |                             |

|   |   |                |   |                  |   |  |             |  |
|---|---|----------------|---|------------------|---|--|-------------|--|
| <p><b>PHQ-A Depression Screen</b><sup>35-36</sup></p>             | <p>Abbreviated screen specifically for depression</p> | <p>9 items</p> | <p>12 to 18</p>   | <p>&lt;5 min</p> | <p>Sensitivity: 87.1%<br/>         Specificity: 79.7%<br/>         PPV: 39.7%<br/>         NPV: 97.58%<br/>         AOC: .939<br/>         Cronbach's alpha: .835</p> | <p>Available in multiple languages</p> | <p>Free</p> |  |
| <p><b>PHQ-2 (Patient Health Questionnaire 2)</b><sup>37</sup></p> | <p>First items of PHQ-9</p>                           | <p>2 items</p> | <p>13-16 year old in- and outpatients in pediatric hospitals in Munich, Germany</p> | <p>&lt;5 min</p> | <p>Optimal cut point score of 2 or greater. Sensitivity: 85% Specificity: 79.4% PPV: 37% NPV: 97.4% AUC: 87.2%</p>  | <p>German</p>                          | <p>Free</p> |  |
|   |   |                | <p>13 to 17</p>   |                  |   | <p>English</p>                         |             |  |
|   |   |                |   |                  | <p>Optimal cut point score of 2 or greater. Sensitivity: 74% Specificity: 75% AOC: 0.84</p>   |  |             |  |

**Table 2: Anxiety Screening Measures**

| Anxiety Screening Measures  |   |                   |                     |        |   |  |           |
|---|---|-------------------|---------------------|--------|---|--|-----------|
| Tool  | Description   | # of Items/Format | Ages                | Time   | Psychometric Properties   | Languages  | Cost      |
| <b>MASC (Multidimensional Anxiety Scale for Children)</b> <sup>38-39</sup>                  | Broad dimensions of anxiety-physical symptoms, harm avoidance, social anxiety, and separation/panic | 39 items          | 8 to 19             | 15 min | Gender: girls scored higher across all scale than boys.   | English, Taiwanese   | \$189/kit |
|   |   |                   | 8 to 13 in Sydney   |        | Cronbach's alpha: .89 (child)<br>Cronbach's alpha: .90 (parent)<br>Parent Child concordance: range .20 to .36 | English  |           |
| <b>GAD-7 (Generalized Anxiety Disorder Scale)</b> <sup>40</sup>                             | Self-report anxiety scale   | 7 items           | Adolescent to adult | <5 min | Cronbach's alpha: .92<br>Test-retest reliability: intraclass correlation: .83                                 | English + over 30 more languages                                       | Free      |
| <b>SCARED (Self-Report for Childhood Anxiety Related Emotional Disorders)</b> <sup>41</sup> | Child and parent self-report for childhood anxiety  | 41 items          | 8 to 18             | 10 min | Coefficient alpha: 0.90   | English, Arabic, Chinese, French, German, Italian, Portuguese, Spanish | Free      |

|  |  |          |                     |        |   |   |      |
|--|--|----------|---------------------|--------|---|---|------|
| <b>Spence Children's Anxiety Scale</b> <sup>42-44</sup>                    | Self-report that assess six domains of anxiety | 44 items | 8 to 12             | 10 min | Coefficient alpha: 0.9 to 0.92<br>Test-retest 0.60 to 0.63                                  | Available in 22 languages   | Free |
| <b>Penn State Worry Questionnaire (PSWQ)</b> <sup>46</sup>                 | Self-report worry severity questionnaire       | 16 items | Adolescent to adult | <5 min | Cronbach's alpha: 0.95<br>Test-retest reliability: $r = 0.92$<br>Internal consistency = .91 | English, Korean, French, Dutch, Chinese, German, Greek, Italian, Thai | Free |
| <b>Penn State Worry Questionnaire – Children (PSWQ-C)</b> <sup>47-48</sup> | Self-report worry severity questionnaire       | 14 items | 6 to 18             | 5 min  | Test-retest reliability: 0.92<br>Internal Consistency: 0.89                                 | English, Korean, French, Dutch, Chinese, German, Greek, Italian, Thai | Free |

AAP, American Academy of Pediatrics; MCHB, Maternal and Child Health Bureau; NA, not applicable; PPV, positive predictive value; NPV, negative predictive value; ROC, receiver operator curve; *DSM-IV, Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*; ADHD, attention-deficit/hyperactivity disorder; ODD, oppositional-defiant disorder; CD, conduct disorder; OCD, obsessive-compulsive disorder; PTSD, post-traumatic stress disorder; *DSM-III-R, Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised*; *ICD-10, International Classification of Diseases, 10th Edition*.

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